

Not So Photo Perfect

The eye is indeed a complex and amazing structure that works very much like your camera. Images are focused by the natural lens of the eye that lies behind the pupil (which acts like a camera shutter). The visual images received by the retina (similar to a camera film) with its 100 million or so light sensitive cells (91 million rods and 4.5 million cones to be exact) are transmitted by the optic nerve with its one million or so nerve fibers or axons (1.2 million to be more exact) to the brain where the images are processed and interpreted. This is how we see.

Unfortunately, a number of serious eye conditions can present itself without the eyesight being affected to a great extent initially. Take, for example, diabetic retinopathy, a condition in which the back of the eye (the retina) is affected by leakage from diabetes-damaged blood vessels resulting in haemorrhage (bleeding), yellow exudates (fat and protein particles) and macular edema (fluid affecting the macula or the most important region of the retina responsible for good eyesight). Potentially serious sight-threatening diabetic retinopathy can occur without the vision being affected until it is at an advanced stage. By the time the vision is affected, the condition is often irreversible. Chronic glaucoma is another tragedy. It is known as the silent stealer of sight for good reasons. There is progressive loss of the peripheral visual fields. This can be so insidious that not infrequently such patients have turned up at my clinic with only a bit of central vision left. They had only noticed the loss of their side vision when they began knocking into things or people within the area of the lost visual fields. In this issue, we focus on some of more common eye conditions seen during retinal photography.

Apart from diabetic retinopathy which is the *raison d'être* for retinal photography screening, other conditions such as cataract, glaucoma, age-related macular degeneration, branch retinal vein occlusion, epiretinal membrane and macular hole are also detected. A picture certainly paints a thousand words, and in the case of retinal photography, it could save your sight.



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